

# Work Order ID 70163

Monday, May 30, 2011 12:43:54 PM



Page 1

Item ID:	D2916-1	Accept		Setup	Start	
Revision ID:					Stop	
Item Name:	Cable Guard, 212 Skidtube					
Start Date:	5/30/2011	Start Qty:	4.00		Cust Item ID:	
Required Date:	6/8/2011	Req'd Qty:	4.00		Customer:	
Reference:						

Approvals:	Process Plan:		Date:	11-05-30	Tooling:		Date:		Run	Start	
	QC:		Date:		SPC (Y/N):		Date:			Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr								
D2916	Rev B								

100  
 FLOW WATER JET 0.00  
 Waterjet Memo 0.00  
 FLOW CNC Waterjet 1-Cut as per Dwg D2916 ☐ Dwg Rev: B ☐ Prog Rev: B ☐ 2-Debur, if necessary  
 RB 11-6-8  
 (4)

110  
 QC2- Inspect parts off machine FAI/FAIB 0.00  
 QC Memo 0.00  
 Quality Control  
 RB 11-6-8

120  
 HAAS CNC VERTICAL MACHINING #1 0.00  
 HAAS 1 Memo 0.00  
 HAAS CNC vertical machine #1 BATCH: 117 738 ☐ 1- Mill as per Folio FA2916-1 Rev: 11/06/14  
 & Dwg D2916 Rev: B ☐ 2-Debur per dwg D2916  
 4 0

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 70163**

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Monday, May 30, 2011 12:43:54 PM

Item ID: D2916-1

Accept



Setup Start



Revision ID:

Stop



Item Name: Cable Guard, 212 Skidtube

Start Date: 5/30/2011 Start Qty: 4.00



Cust Item ID:

Required Date: 6/8/2011 Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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130

QC2- Inspect parts off machine FAI/FAIB

0.00

BA 11/06/14

4

0



QC

Memo

0.00

Quality Control

140

QC8- Inspect parts - second check

0.00

SL 11/06/15

(4)



QC

Memo

0.00

Quality Control

150

Identify as per dwg &amp; Stock Location: 207

0.00

11/6/15 (4) \$



Packaging

Memo

0.00

Packaging

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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**Work Order ID 70163**



Monday, May 30, 2011 12:43:54 PM



Page 3

Item ID: D2916-1      Accept            Setup Start        
Revision ID:      Stop        
Item Name: Cable Guard, 212 Skidtube  
Start Date: 5/30/2011      Start Qty: 4.00            Cust Item ID:  
Required Date: 6/8/2011      Req'd Qty: 4.00            Customer:  
Reference:

Approvals:      Process Plan: \_\_\_\_\_      Date: \_\_\_\_\_      Tooling: \_\_\_\_\_      Date: \_\_\_\_\_      Run Start        
QC: \_\_\_\_\_      Date: \_\_\_\_\_      SPC (Y/N): \_\_\_\_\_      Date: \_\_\_\_\_      Stop      

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160  QC Quality Control	QC21- Final Inspection - Work Order Release  Memo	0.00  0.00							 5/30/11

11-0615  
(4)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

# Picklist Print

Monday, May 30, 2011 12:44:03 PM

Page 1

Work Order ID: 70163



Parent Item: D2916-1



Parent Item Name: Cable Guard, 212 Skidtube

Start Date: 5/30/2011

Required Date: 6/8/2011

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A New Issue 06-06-19 JLM  
IPP Rev:B Now water jet 06-07-14 EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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MUHMWB10

Purchased

No

100

sf

381.6000

0.475

2



B11-6-8

UHMW 1" Black

Location

Loc Qty

Loc Code

MAT018

381.6

116554

2

117321

76.6

117738

63

117819

240

117738

(4)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries



<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	70163
<b>Description:</b> Cable Guard		<b>Part Number:</b>	D2916-1
<b>Inspection Dwg:</b> D2916 <b>Rev:</b> B		<b>Page 1 of 1</b>	

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article      ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.75	+/-0.030	1.743	✓		Vern	GA-01
38.94	+/-0.030	38.920	✓		Tape	GA-12
35.94	+/-0.030	35.960	✓		"	"
32.25	+/-0.030	32.250	✓		"	"
29.00	+/-0.030	29.000	✓		"	"
15.00	+/-0.030	15.000	✓		"	"
11.31	+/-0.030	11.310	✓		"	"
3.19	+/-0.030	3.190	✓		Vern	GA-01
2.000	+/-0.010	2.001	✓		"	"
21.125	+/-0.010	21.125	✓		Tape	GA-12
37.938	+/-0.010	37.938	✓		"	"
Ø0.438	+0.005/-0.000	Ø0.438	✓		Vern	GA-01
25.00	+/-0.030	25.000	✓		Tape	GA-12
24.00	+/-0.030	24.000	✓		"	"
16.50	+/-0.030	16.500	✓		"	"
15.01	+/-0.030	15.010	✓		"	"
3.25	+/-0.030	3.250	✓		Vern	GA-01
2.33	+/-0.030	2.328	✓		"	"
A-A	0.78	+/-0.030	0.783	✓	"	"
	0.70	+/-0.030	0.697	✓	"	"
B-B	0.140	+/-0.010	0.142	✓	"	"
	0.360	+/-0.010	0.355	✓	Mic	GA-03
	0.88	+/-0.030	0.864	✓	Vern	GA-01
C-C	1.31	+/-0.030	1.305	✓	"	"
	0.78	+/-0.030	0.781	✓	"	"
	0.33	+/-0.030	0.325	✓	Mic	GA-03
D-D	0.37	+/-0.030	0.373	✓	D-6	GA-08
	Ø0.438	+0.005/-0.000	Ø0.438	✓	Vern	GA-01
	Ø0.875	+/-0.010	Ø0.875	✓	"	"
E-E	Ø0.260	+0.005/-0.000	Ø0.261	✓	"	"
	0.37	+/-0.030	0.373	✓	D-6	GA-08
	Ø0.875	+/-0.010	Ø0.875	✓	Vern	GA-01
J-J	1.44	+/-0.030	1.445	✓	"	"
	0.063	+/-0.010	0.061	✓	"	"

<b>Measured by:</b> DA	<b>Audited by:</b> SL	<b>Prototype Approval:</b>	N/A
<b>Date:</b> 11/06/15	<b>Date:</b> 11/06/15	<b>Date:</b>	N/A

Rev	Date	Change	Revised by	Approved
A	04.01.12	New Issue      P/O D205-665-015	KJ/RF	JF

W/O:		WORK ORDER CHANGES					
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

SHOP COPY

RI  
EN

**DART**

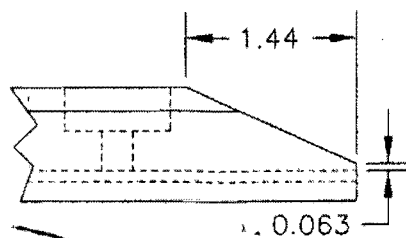
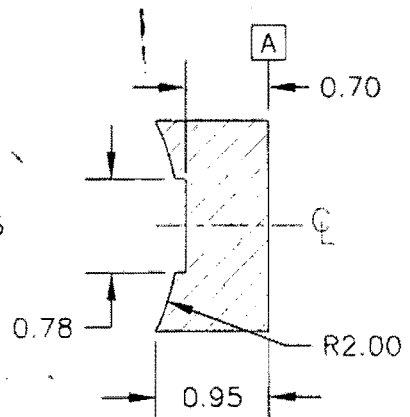
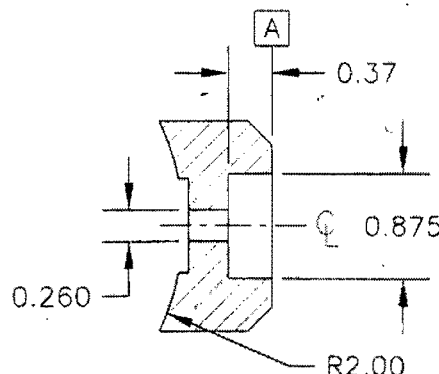
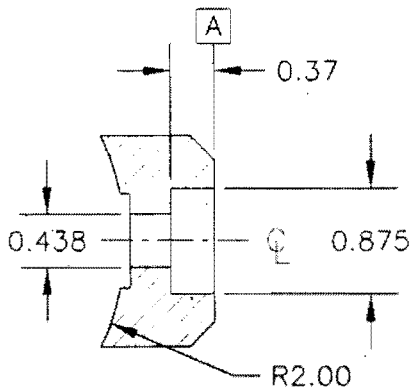
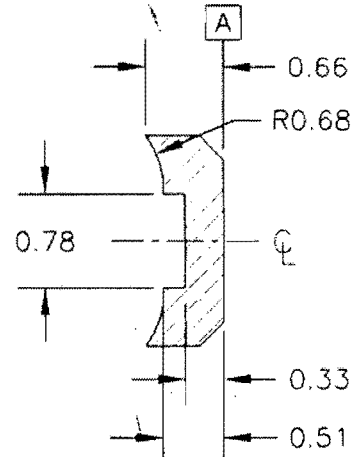
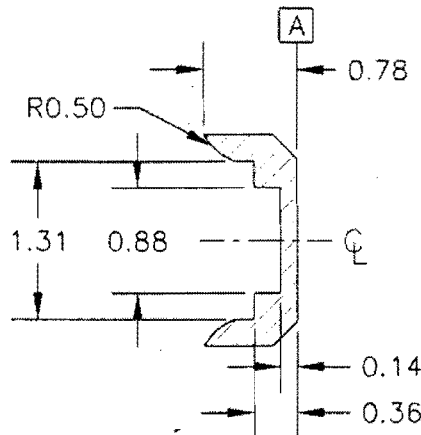
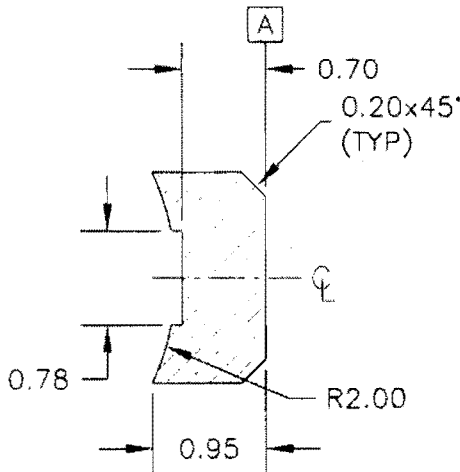


UNCONT

SUBJECT TO AMENDMENT  
WITHOUT NOTICE

WORK ORDER  
NO. 70163 PL 11-05-30

DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2916	REV. B SHEET 1 OF 2
DATE 00.02.24		TITLE CABLE GUARD	SCALE 1:6
A	99.09.29	NEW ISSUE	
B	00.02.24	ADD K-K FOR D2521 COMPATIBILITY	



**RELEASED**  
00.02.25 DS

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

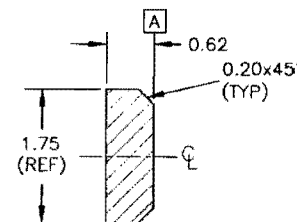
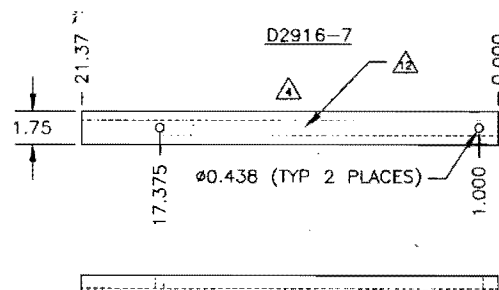
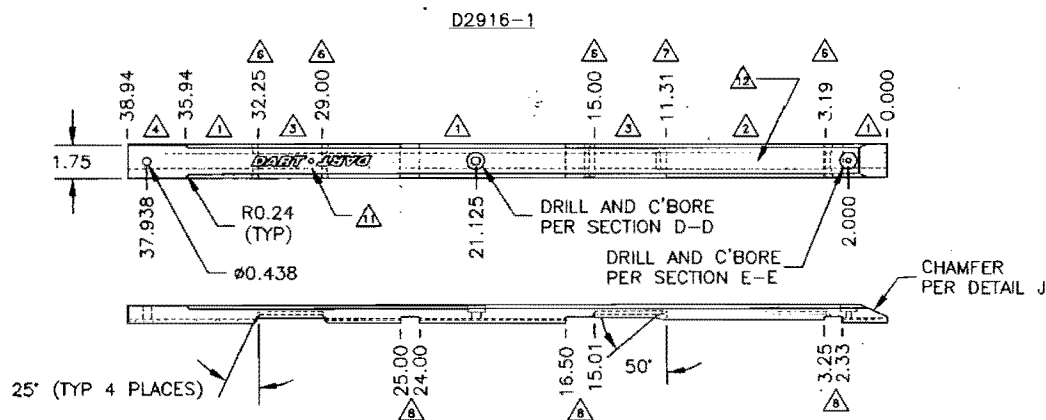
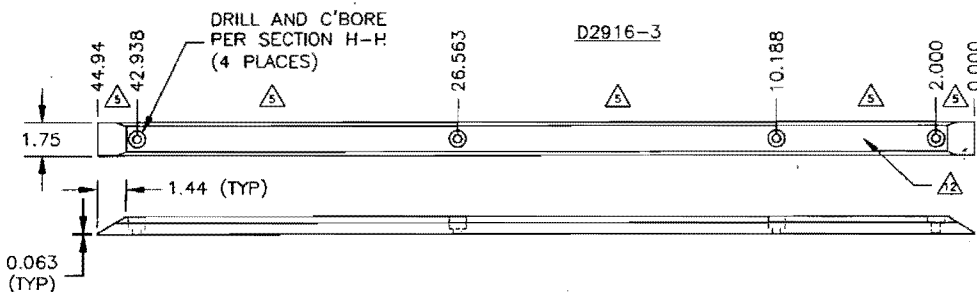
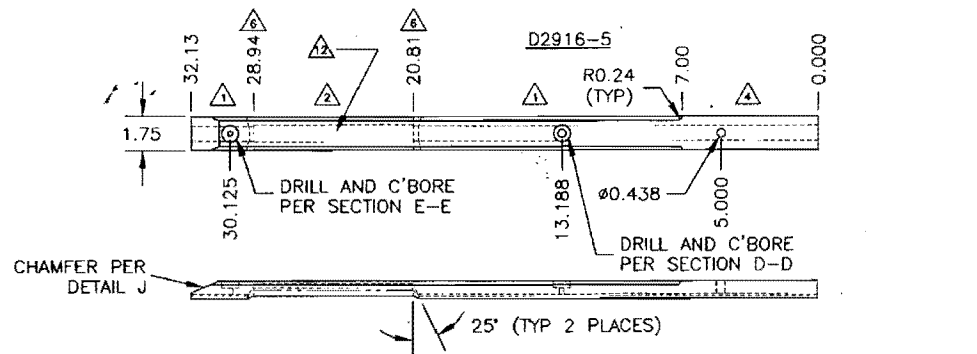
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

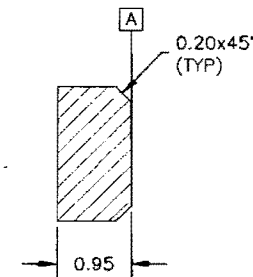
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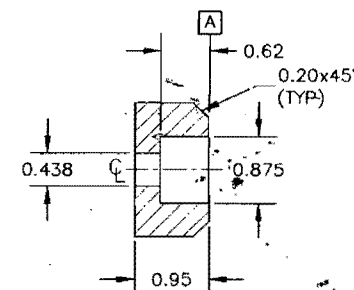
W/O 7063



SECTION K-K  
(SCALE 2:3)



SECTION G-G  
(SCALE 2:3)



SECTION H-H  
(SCALE 2:3)

NOTES:

- 1) MACHINE CONSTANT SECTION A-A
- 2) MACHINE CONSTANT SECTION B-B
- 3) MACHINE CONSTANT SECTION C-C
- 4) MACHINE CONSTANT SECTION F-F
- 5) MACHINE CONSTANT SECTION G-G
- 6) 25° ANGLE OF TRANSITION BETWEEN SECTIONS WITH MIN RADIUS OF 0.50
- 7) 50° ANGLE OF TRANSITION BETWEEN SECTIONS WITH MIN RADIUS OF 0.50
- 8) MACHINE SLOT PER SECTION K-K WITH 0.063 RADIUS OF TRANSITION BETWEEN SECTIONS
- 9) MATERIAL: UHMW BLACK PER SPEC CONTROL DWG D2689
- 10) BREAK ALL UNMARKED RADII 0.020 TO 0.040
- 11) ENGRAVE TWO DART LOGOS (OPPOSITE AS SHOWN) ON UPPER SIDE TO MAX DEPTH OF 0.015 AND MIN RADIUS OF 0.250.
- 12) ENGRAVE P/N ON LOWER SIDE TO MAX DEPTH OF 0.010 AND MIN RADIUS OF 0.010.
- 13) ALL HOLES DRILLED ON CENTERLINES
- 14) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 15) ALL DIMENSIONS ARE IN INCHES

RELEASED  
00.02.25 03

DESIGN	DRAWN BY	DART DART AEROSPACE LTD HAMILTON, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	REV. B
DATE	TITLE	D2916	SHEET 2 OF 2
00.02.24	CABLE GUARD	SCALE	1:6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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